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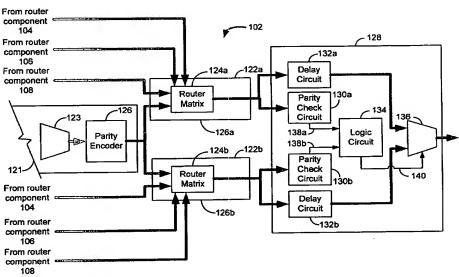
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(54) **Title: A FAULT-TOLERANT BROADCAST ROUTER**

(57) **Abstract:** A fault-tolerant router (100) includes first and second router matrix card (122a and 122b). The first and second router matrix cards (122a, 122b) receive a common set of 4n parity encoded input digital audio data streams and respectively generates therefrom, first and second sets of M output digital audio streams. As the first and second sets of data streams propagate along the first and second router matrix cards (122a and 122b), respectively, one or more health bits are set whenever an error or other type of fault condition is detected. First and second parity check circuits (130a and 130b) are configured to detect parity errors and/or assess the relative health of the first and second sets of data streams and one of the two sets of data streams is selected as the output of the fault-tolerant router (100) based upon either the parity error analysis, health analysis or both.

WO 2004/002050 A1